

**Notice of Allowability**

Application No.

10/707,655

Examiner

Dwin M. Craig

Applicant(s)

ARAGONES, JAMES KENNETH

Art Unit

2123

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 8/22/07.
2. ☒ The allowed claim(s) is/are 1-8 and 10-36.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
  1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

### REASONS FOR ALLOWANCE

1. Claims 1-8 and 10-36 are allowed.

#### *Examiner's Reasons for Allowance*

2. The following is an examiner's statement of reasons for allowance:

Regarding independent claims 1, 13 and 25, while *Nguyen* teaches an engine service database as well as generating a baseline model and *McClish* teaches detrended engine data, **none of these references taken either alone or in combination with the prior art of record disclose** eliminating a smoothing effect to isolate a plurality of deterioration time effects on a measure parameter and then removing the deterioration time effects from a baseline model to generate a detrended baseline model, specifically including:

(claim 1) "...eliminates the smoothed effect from the initial engine baseline model to isolate a plurality of deterioration time effects on a measured parameter and removes the deterioration time effects from the initial baseline model to generate a detrended baseline model",

(claim 13) "...eliminating the smoothed effect from the initial baseline model to isolate a plurality of deterioration time effects on a measured parameter; and removing the deterioration time effects from the initial engine baseline model to generate a detrended engine baseline model;...",

(claim 25) "...one or more instructions for eliminating the smoothed effect from the initial engine baseline model to isolate a plurality of deterioration time effects on a measured parameter; and one or more instructions for removing the deterioration time effects from the initial engine baseline model to generate a detrended engine baseline model...", **in combination**

Art Unit: 2123

**with the remaining elements and features of the claimed invention.** It is for these reasons that Applicants' invention defines over the prior art of record.

Regarding independent claims 10, 12, 22, 24, 34 and 36 while *Nguyen* teaches an engine service database as well as generating a baseline model and *McClish* teaches detrended engine data, **none of these references taken either alone or in combination with the prior art of record disclose** an engine baseline modeling component that identifies and correlates data from different groups and then combines that data to build a final engine baseline model using regression analysis, specifically including:

(claim 10) "...wherein the engine baseline modeling component identifies correlated groups of engine data based upon the initial baseline model and wherein the engine baseline modeling component combines data from correlated groups, and wherein the engine baseline modeling component builds a final engine baseline model from the combined data using regression analysis...",

(claim 12) "...wherein the engine baseline modeling component identifies segments relating to related engines, wherein the engine baseline modeling component smoothes the parameter estimates for each identified related engine segments, and wherein the engine baseline modeling component builds a final model from the average data using regression analysis..."

(claim 22) "...identifying correlated groups of engine data based on the initial engine baseline model; combining data from correlated groups; building a final engine baseline model from the combined data using a regression analysis...",

(claim 24) "...identifying segments relating to related engines, smoothing parameter estimates for each of the related engine segments; building a final engine baseline model from the averaging data using a regression analysis...",

(claim 34) "...one or more instructions for identifying correlated groups of engine data based upon the initial engine baseline model; one or more instructions identifying correlated groups of engine data based upon the initial engine baseline model; one or more instructions for combining data from correlated groups; one or more instructions for building a final engine baseline model from the combined data using regression analysis...",

(claim 36) "...one or more instructions for identifying segments relating to related engines; one or more instructions for smoothing the parameter estimates for each of the identified related engine segments; one or more instructions for building a final engine baseline model from averaged data using a regression analysis...", **in combination with the remaining elements and features of the claimed invention.** It is for these reasons that Applicants' invention defines over the prior art of record.

Further and in regards to the reasons for allowance for claims 10, 12, 22, 24, 34 and 36, the Examiner has found Applicants' arguments presented in the 8/22/2007 responses, on pages 14-16 persuasive, more specifically the argument on page 14 that; "Applicant has carefully reviewed the material in Figs. 5 and 6 cited by the Examiner in Nguyen and submit that these Figures do not disclose *a data segmenting component that segments engine data into a plurality of groups and an engine baseline modeling component that identifies correlated groups of engine data based upon an initial engine baseline model*" The Examiner has found this argument to be persuasive.

Art Unit: 2123

Further, and in regards to claims 25-36, the Examiner notes that in Applicants' specification in the section labeled [0045] is disclosed the following: "In the context of this application, the computer-readable medium can be any means that can contain, store, communicate, propagate, transmit or transport instructions..." The claim language in claims 25-36 limits the computer readable medium to the storage medium and excludes any communication medium or any medium that can communicate, propagate, transmit or transport.

**2.1** Regarding dependent claims 2-8, 11, 14-21, 23, 26-33 and 35 are allowed for at least the reason that they depend upon an allowed base claim.

**2.2** Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

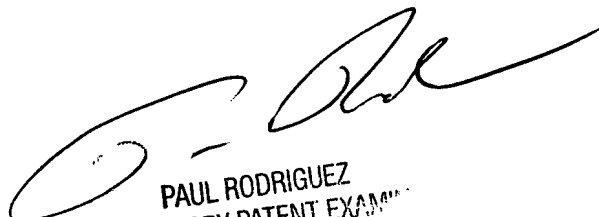
**3.** Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dwain M. Craig whose telephone number is (571) 272-3710. The examiner can normally be reached on 10:00 - 6:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul L. Rodriguez can be reached on (571) 272-3753. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2123

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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